

REMARKS

Claims 1-25 are pending in the above application.

The oath or declaration stands rejected to as being defective for reasons listed in paragraph 1 of the Office Action. Applicants respectfully agree with the Examiner's determination and will submit a substitute Oath/Declaration that addresses the Examiner's concerns. Consideration of the new Oath/Declaration is respectfully requested.

Claims 1-25 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for reasons enumerated in paragraph 4 of the Office Action. Applicants respectfully agree with the Examiner's rejection with respect to claim 12 and respectfully traverse the Examiner's rejection with respect to claims 1, 4-7, 13 and 18.

In an effort to move this case towards allowance, Applicants have modified claims 1, 12, 13 and 18 to correct the perceived deficiencies. Specifically, in claim 1, Applicants have replaced the phrase "the type of resinous coating" with "a type of a resinous residue found." Similarly, in claims 13 and 18, Applicants have replaced the phrase "the type of resinous coating" with "a type of the resinous residue found." Further, Applicants have modified claim 13 to replace "may be" with "is." Regarding claim 12, applicants have corrected the antecedent basis problem, amending claim 12 to properly depend from claim 11. Applicants have also amended claim 12 to correct other indefiniteness concerns. Applicants respectfully submit that these changes are fully supported by the originally filed specification and thus do not constitute new matter.

Regarding claims 4-7, Applicants respectfully disagree that the claims are indefinite. In these claims, the relevant portion, step (b) of claim 1 (relating to a washer/extractor machine), is simply being replaced in claims 4-7 by a more specific and limiting washer/extractor machine. Applicants respectfully submit that the claim is proper and clear as drafted.

Applicants respectfully submit that the changes to claims 1, 12, 13 and 18 above overcome the Examiner's 112, second paragraph rejections with respect to claims 1-25. Reconsideration of claims 1-25 is thus respectfully requested.

Claims 1-25 also stand rejected under 35 U.S.C. 103(a), as being unpatentable over Yount (U.S. Patent No. 4,300,955) in combination with Dong (U.S. Patent No. 6,251,224) and Al-Jumah et al. (Re. 36,389). Applicants respectfully traverse the Examiner's rejection.

Yount discloses a method for removing a resinous coating for spun fiberglass products with an aqueous phosphoric acid solution. The Yount process has at least three perceived drawbacks. First, the system as proposed is labor intensive, requiring the physical moving of the fiberglass on a screen from the acid bath to a rinsing bath. Second, the system as proposed is sluggish in removing the resin from the fiberglass. Finally, the recovered glass is difficult to reuse in most manufacturing applications. The present invention addresses these drawbacks by utilizing a washer/extractor machine to remove the resinous coating from fibrous materials that, the Examiner acknowledges, the Yount reference does not disclose. Further, as the Examiner acknowledges, Yount does not disclose any post processing of the recovered fibers, including applying a sizing composition, forming a fiberglass mat, the single and multi-chamber extractor machine, drying the fiber in an oven, nor forming a slurry of fibers having fibers and a binder material. Finally Yount does not disclose any post processing to recover the resinous component portion as disclosed in claims 13-25.

Dong discloses a method for forming a bicomponent mat of glass fibers and pulp fibers that includes the use of a sizing composition and the drying of fibers within an oven. Dong does not disclose a process for reclaiming fibers and/or resin from a resinous fibrous product as is required in all of the 25 claims of the present invention.

Al Jumah et al. discloses a process for removing contaminants, especially polyester and cellulosic contaminants, from polyolefins. The polyolefins, particularly polymonoolefins such as polypropylene, are used as bale wrapper. The process for removing the contaminants is achieved by introducing the fibers to a reaction vessel, or washer extractor machine, that contains a solution having a hydroxide composition and preferably an oxidizing agent. The contaminants in Al Jumah et al. are not a portion of the resinous fibrous product as in the present invention, but instead are residual by-products that may become coupled (stuck) to the surface of the underlying polyolefins during their intended use. In Al Jumah et al., residual polyester and cotton may be

stuck to the surface of the polyolefin while these products are being baled. In the present invention, on the other hand, the continuous or chopped type fibers are actually treated (coated with a resin material that is subsequently cured) with the resinous component, particularly nitrogenous components such as urea-formaldehyde resins, prior to use. Because of this, stronger acids such as phosphoric acid must be used to remove the resinous component.

Al Jumah et al. also does not disclose any post processing of the contaminant free material nor any post processing to recover any resinous component. Thus, the Al Jumah et al. reference does not disclose applying a sizing composition, forming a fiberglass mat, a multi-chamber extractor machine, drying the fiber in an oven, nor forming a slurry of fibers having fibers and a binder material. These steps are unnecessary in Al Jumah et al. because the polyolefin baling is recovered after the sodium hydroxide wash in a usable form. Further, Al Jumah does not disclose any methods of recovering the resinous component as shown in claims 13-25. As such, Applicants respectfully submit that the process in Al Jumah et al. is substantially different than in the present invention as claimed in claims 1-25.

It would not be obvious to combine the Yount, Dong, and Al Jumah et al. references to arrive at the present invention. No reason is shown why one of ordinary skill in the art would modify the Yount reference as the Office Action proposes. The Dong reference is not pertinent to the problem of removing resinous residue from fibrous products in order that the fibrous products may be reused. The Al Jumah et al. is not pertinent to removing coated resins from resinous fibrous products to recover fibers, but instead removing contaminants not related to the underlying fibers prior to reuse. Further, none of the three references discusses any post-removal recovery steps of the resinous component as in claims 13-25.

Obviousness cannot be established by combining pieces of prior art absent some "teaching, suggestion, or incentive supporting the combination"¹. Where a combination, invention can only be arrived at by combining various components described in separate prior art references, there must be some reason for the combination; a teaching, a motivation, an incentive, or a suggestion.²

¹ In *Re Geiger*, 815 F.2d 686, 2. U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987).

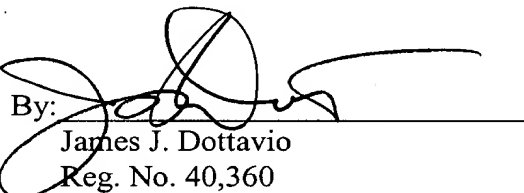
² In *re Laskowski*, 871 F.2d 115, 117, 10 U.S.P.Q.2d 1397, 1398-99 (Fed. Cir. 1989).

The rejection relies upon improper use of hindsight and improper logic to re-create the presently claimed combination of ingredients. The invention is not obvious from the prior art itself. One cannot use hindsight reconstruction, picking and choosing among isolated disclosures in the prior art, to deny that the claimed invention is unobvious.³

Claims 1-25 are not obvious in view of the cited prior art. No teaching, suggestion, or incentive has been proposed by the Examiner supporting the combination of the Dong reference and the Al Jumah et al. reference with the Yount reference to arrive at the present invention as claimed. Reconsideration of claims 1-25 is thus respectfully requested.

In view of the foregoing amendments and remarks, applicants submit that claims 1-25 are allowable. The Examiner is invited to telephone the applicants' undersigned attorney at (614) 321-7167 if any unresolved matters remain.

Respectfully submitted,

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³ In re Fine, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend claims 1, 12, 13 and 18 as follows:

1. (Amended) A process for reclaiming fibers from a resinous fibrous product comprising the steps of:

(a) selecting an acid for use in an acid bath solution as a function of **[the type of resinous coating] a type of a resinous residue found** on the resinous fibrous product;

(b) inserting the resinous fibrous product into a washer/extractor machine, wherein said resinous fibrous product comprises a form including a strand form and a mat form;

(c) while said resinous fibrous product is in said machine, performing the steps of:

(i) introducing said resinous fibrous product to said acid bath solution heated to approximately 200 degrees Fahrenheit for a period of time sufficient to substantially remove **[a] said** resinous residue from a fiber portion of the resinous fibrous product;

(ii) removing said acid bath solution and said resinous residue from said washer/extractor machine;

(iii) rinsing said fiber portion to remove any residual acid bath solution and resinous residue;

(d) removing said fiber portion from said washer/extractor machine; and

(e) dewatering said fiber portion.

12. (Amended) The method of claim **[12] 11**, wherein the step of forming said slurry **[is formed within said machine] comprises the step of forming a slurry within said washer/extractor machine, said slurry comprising said fibers and a binder.**

13. (Amended) A method for recovering a resinous residue from a resinous fibrous product that may be further processed into a usable nitrogen product comprising the steps of:

selecting an acid for use in an acid bath solution as a function of **[the type of resinous coating] a type of the resinous residue found** on the resinous fibrous product;

inserting the resinous fibrous product within a washer/extractor machine, wherein the resinous fibrous product **[may be] is** in the form of a plurality of strands or in the form of a mat;

introducing said resinous fibrous product to said acid bath solution heated to approximately 200 degrees Fahrenheit for a period of time sufficient to substantially remove the resinous residue from a fibrous portion of the resinous fibrous product;

removing said acid bath solution and **[said] the** resinous residue from said washer/extractor machine;

introducing said acid bath solution and **[said] the** resinous residue into a cooling line to precipitate **[said] the** resinous residue; and

removing **[said] the** precipitated resinous residue from said acid bath solution using a clarifier.

18. (Amended) A method for reclaiming fibrous and a resinous residue from a resinous fibrous product in the form of a strand or a mat comprising the steps of:

selecting an acid for use in an acid bath solution as a function of **[the type of resinous coating] a type of the resinous residue found** on the resinous fibrous product;

inserting the resinous fibrous product within a washer/extractor machine;

introducing said resinous fibrous product to said acid bath solution heated to approximately 200 degrees Fahrenheit for a period

of time sufficient to substantially remove the resinous residue from a fibrous portion of the resinous fibrous product;

removing said acid bath solution and said resinous residue from said washer/extractor machine;

rinsing said fibrous portion to remove any residual acid bath solution and resinous residue;

removing said fibrous portion from said washer/extractor machine;

dewatering said fibrous portion;

introducing said acid bath solution and said resinous residue into a cooling line to precipitate said resinous residue; and

removing said precipitated resinous residue from said acid bath solution using a clarifier.